

REMARKS

This paper is responsive to the Final Office Action dated May 29, 2008. All rejections and objections of the Examiner are respectfully traversed. Reconsideration and further examination are respectfully requested.

Applicant wishes to thank Examiner Kawsar for his time preliminarily reviewing the amendments herein and his helpfulness in discussing the amended claims by phone with the undersigned Attorney on September 29, 2008. In that discussion, the Examiner indicated that, subject to further consideration and search, the present amended claims appear to overcome the currently cited references.

The amendments to the claims are intended to clarify the claim language and more precisely set forth the present invention. Support for the claim amendments is found throughout the Specification as originally filed. For example, see lines 19-21 on page 2, line 27 on page 7 through line 3 on page 8, and lines 3-14 on page 13. No new matter has been added.

At paragraphs 2-3 of the Office Action, the Examiner rejected claims 1, 2, 5-11, 13-15 and 20-23 for indefiniteness under 35 U.S.C. 112, second paragraph. Amendments to the claims herein are respectfully believed to meet all requirements of the Examiner in this regard.

At paragraphs 4-17 of the Office Action, the Examiner rejected claims 1, 2, 5-11 and 13-15 for obviousness under 35 U.S.C. 103, citing U.S. patent 6,691,067 of Ding et al. (“Ding”). Applicant respectfully traverses these rejections.

Ding discloses an enterprise management system that includes statistical recreation of system resource usage for monitoring, prediction, and performance workload characterization. In Ding, an agent computer system includes agent software for collecting data relating to one or

more metrics, i.e., measurements of system resources. Metric data is continually collected by the agent software of Ding over the course of a measurement interval, regularly placed into a registry of metrics, and then periodically sampled from the registry indirectly.

Nowhere in Ding is there disclosed or suggested a method for monitoring system processor usage time of a software agent operating in a computer system, wherein said agent comprises an executable sequence of instructions, said method comprising the steps of:

identifying said agent by associating an agent identifier therewith;  
initiating, responsive to said identifying of said agent, an agent lifetime timer for measuring an operating interval of said agent;  
determining said operating interval using said lifetime timer by identifying a start time and a completion time of said agent and computing an elapsed time as the difference between said starting time and said completion time for said agent;  
*calculating an amount of system processor resources utilized by said agent during said operating interval by detecting creation of a plurality of threads by said agent, determining CPU usage for each of said plurality of threads and adding said determined CPU usage for each of said plurality of threads to said amount of system processor resources utilized by said agent during said operating interval as each of said plurality of threads expire, wherein each of said plurality of threads is a path of execution such that multiple of said plurality of threads can be executed simultaneously;* and

storing said operating interval, said amount of system processor resources utilized by said agent during said operating interval and said agent identifier in a computer-readable memory. (emphasis added)

as in the present independent claim 1. In contrast, Ding is concerned with using a software agent *to monitor an agent computer system*. For example, the agent 302 in Ding operates to report data regarding an agent node 300 to one or more monitors (e.g. 402). The agents in Ding assist in monitoring the performance of a computer system node. While Ding discloses in lines 31-39 of column 13 that sampled events may include process lifetimes, and that "process" may refer to an executing program, a task, a thread, or any other unit of execution, nothing in Ding discloses or suggests the calculating of an amount of system processor resources utilized by an agent during an operating interval by detecting creation of a plurality of threads by

the agent, determining CPU usage for each of the plurality of threads and adding the determined CPU usage for each of the plurality of threads to the amount of system processor resources utilized by the agent during the operating interval as each of the plurality of threads expire, wherein each of the plurality of threads is a path of execution such that multiple of the plurality of threads can be executed simultaneously, as in the present independent claim 1.

From the discussion above it should also be clear that Ding does not disclose or suggest the detecting creation of a plurality of threads by the agent, determining CPU usage for each of the plurality of threads and adding said determined CPU usage for each of the plurality of threads to the amount of system processor resources utilized by the agent during the agent lifetime as each of the plurality of threads expire, wherein each of the plurality of threads is a path of execution such that multiple of the plurality of threads can be executed simultaneously, as in the present independent claim 13.

Accordingly Ding does not disclose or suggest all the features of the present independent claims 1 and 13. Ding therefore does not support a *prima facie* case of obviousness under 35 U.S.C. 103 with regard to independent claims 1 and 13. As to dependent claims 2, 5-11 and 14-15, they each depend from independent claims 1 and 13, and are believed to be patentable over Ding for at least the same reasons.

In paragraphs 18-22 of the Office Action, the Examiner rejected claims 20-23 for obviousness under 35 U.S.C. 103, based on the combination Ding and U.S. patent number 6,330,588 (“Freeman”). Applicant respectfully traverses this rejection.

Freeman discloses a system for verification of software agents and their activities in a distributed computing environment including an origin resource, a destination resource and a trusted resource. The origin resource of Freeman is associated with a software agent. The

destination resource of Freeman is expected to advance the agent in the performance of an entrusted task, and the trusted resource is associated with the software agent in that the trusted resource functions to provide verification of the software agent and its activities. The trusted resource of Freeman supports one or more selected operations such as receiving/forwarding of software agents and other operations.

Nowhere in the combination of Ding and Freeman is there disclosed or suggested any determining CPU usage for each of a plurality of threads and adding the determined CPU usage for each of the plurality of threads to the amount of said system processor time utilized by the identified thread set as each of the plurality of threads expire, wherein each of the plurality of threads is a path of execution such that multiple of the plurality of threads can be executed simultaneously, as in the present independent claim 20. Nothing in either Ding and/or Freeman discloses or suggests any way of effectively determining resource usage for multi-threaded software agents.

For the above reasons, Applicant respectfully urges that the combination of Ding and Freeman does not disclose or suggest all the features of the present independent claim 20. The combination of Ding and Freeman therefore does not support a *prima facie* case of obviousness under 35 U.S.C. 103 with regard to claim 20. As to claims 21-23, they each depend from claim 20, and are respectfully believed to be patentable over the combination of Ding and Freeman for at least the same reasons.

Applicant has amended the independent claims. Applicant is not conceding in this application that the unamended claims are not patentable over the art cited by the Examiner, as the present claim amendments are only for facilitating expeditious prosecution of allowable

subject matter. Applicant respectfully reserves the right to pursue the unamended claims in one or more continuations and/or divisional patent applications.

Applicant has made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Applicant's Attorney at the number listed below so that such issues may be resolved as expeditiously as possible.

For these reasons, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited.

Respectfully Submitted,

September 29, 2008

Date

/David Dagg/

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